Appendix I

Nebraska Long-Range Transportation Plan

Existing Conditions and Future Needs of Nebraska's Transportation System

Nebraska Department of Roads
March 2012

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1.0 Existing Conditions…The Context for Planning the Future

1.1 Nebraska Geography, Population, and Economy

This section describes Nebraska's geographic, population, and economic characteristics, trends, and examines how these trends will affect future transportation needs in Nebraska.

Geography

The geography and climate determine much of the past, present, and future for Nebraska's population and economy. Nebraska's geography has historically assured that:

- Nebraska is a primary agricultural producer and shipper to the nation and to the entire world; and
- Tremendous amounts of freight travel to and through Nebraska both on railroads and on highways.

Population

Nebraska's resident population increased from 1.58 million in 1990 to 1.76 million in 2005, an increase of 11.4 percent. As shown in Figure 1.1, the largest increase occurred in the southeastern portion of the State and along I-80.

Nebraska Population Change: Percentage by County 1990 to 2005

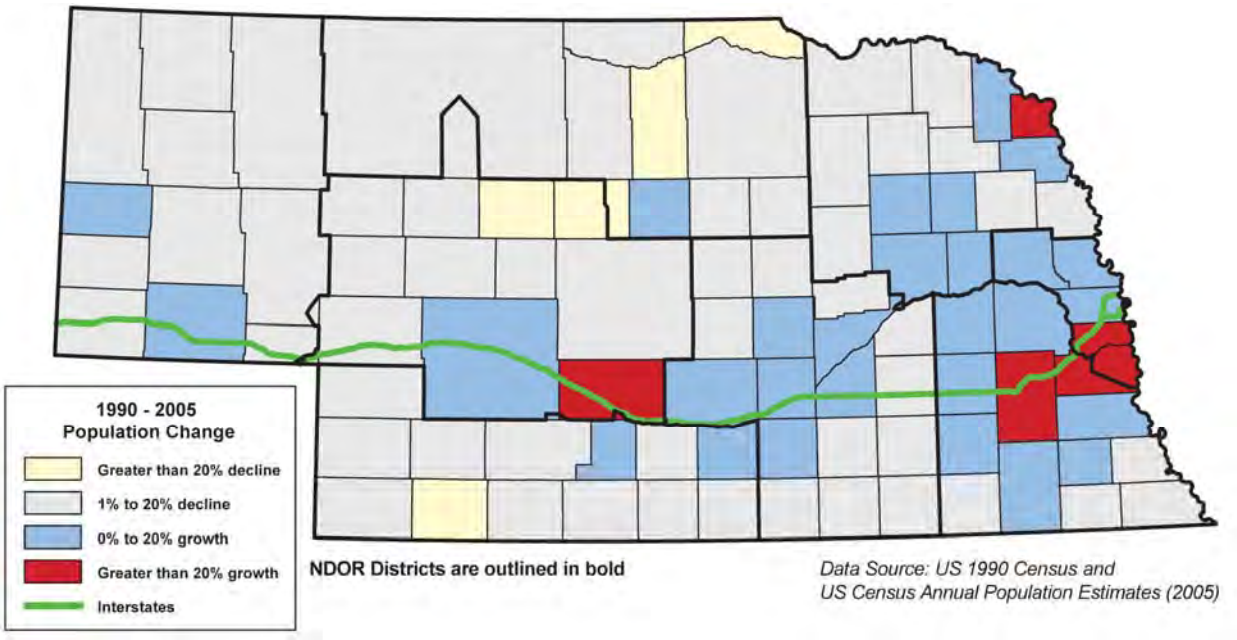


Figure 1.1

By 2030, the population of Nebraska is projected to increase to more than 2 million. As shown in Figure 1.2, most of the projected population growth is expected to occur in counties along I-80 and to the east with much of the growth in the State's urbanized areas. Recent trends suggest that the State's population may be stabilizing in some counties. For example from 1970 to 1980, 83 of the 93 Nebraska counties lost population, but for the period of 1990 to 2005, only 60 counties showed population declines and the remaining 30 showed increases. However, future population projections paint a different picture showing that only 26 counties will have population increases through the year 2030, while 67 (72%) may see declines.

Forecast of Nebraska Population Change 2005 to 2030

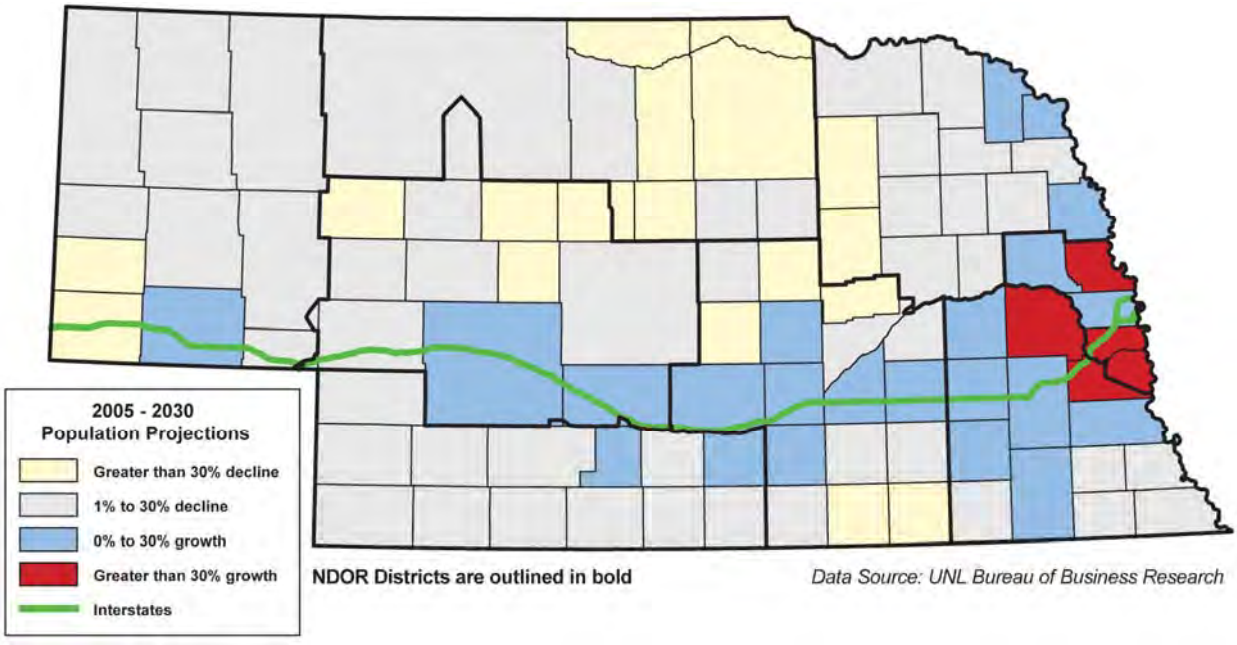


Figure 1.2

The implications of this population forecast are that the need for expanding transportation system capacity will continue be in eastern Nebraska, urbanized areas, and along the I-80 corridor, but the need for infrastructure renewal, system preservation, mobility, accessibility, and maintenance will continue to be spread throughout the state.

Another demographic issue facing Nebraska is increasing share of older residents. The percentage of Nebraska residents age 75 and over is projected to rise from 6.9% in 2008 to 8.4% of the total population by the year 2030. While this is not an alarming increase, it is important to note that 85% of the counties (75 of 93) will exceed the statewide average of 8.4%. Moreover, in six counties, 20% or more of their population will be age 75 and over by 2030.

Economy

Nebraska's economy has shown consistent growth over recent years. According to the U.S. Bureau of Economic Analysis, Nebraska's gross state product grew from $55.5 billion in 2000 to $83.3 billion in 2008. The measure of gross state product includes the value of all goods and services produced in Nebraska.

As shown in Table 1.1, the growing economy has contributed to a continued increase in Nebraska's overall labor force in recent years.

Table 1.1 Labor Force, Employment, and Unemployment in Nebraska, 1990 to 2009

Estimates for Labor Force, Employment, and Unemployment in Thousands

Measure	1990	1995	2000	2005	2009
Labor Force	816.7	906.4	952.1	976.3	984.8
Employment	797.8	882.6	925.9	938.5	938.2
Unemployment	18.9	23.7	26.2	37.8	46.6
Unemployment Rate	2.3%	2.6%	2.7%	3.9%	4.7%

Source: Nebraska Workforce Development, Labor Market Information, Labor Force/Workforce Summaries

Figure 1.3 shows the compilation of gross state product by industry in 2009 as compiled by the U.S. Department of Commerce, Bureau of Economic Analysis. The Professional Services sector is the largest contributor to gross state product (GSP) with at 32.3% share of total GSP in 2009.

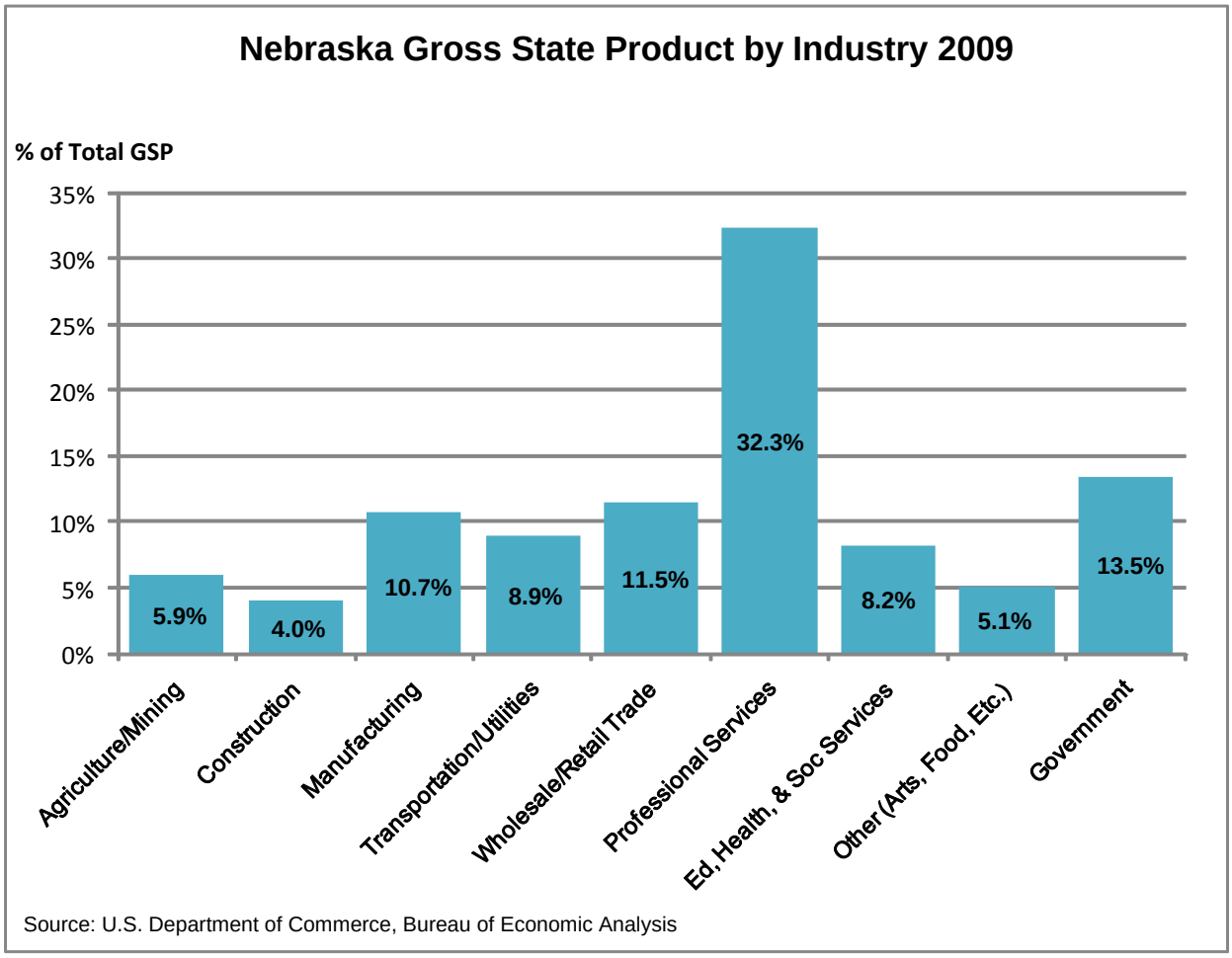


Figure 1.3

Table 1.2 shows employment by industry for each of the transportation districts (see figure 1.4 for district locations) in Nebraska. Overall, Trade, Transportation, Warehousing and Utilities (TTW & U) tends to be the largest employer closely followed by Government. Districts 5 and 6 (see special note on table 1.2) show a higher rate of employment in the TTW & U industry.

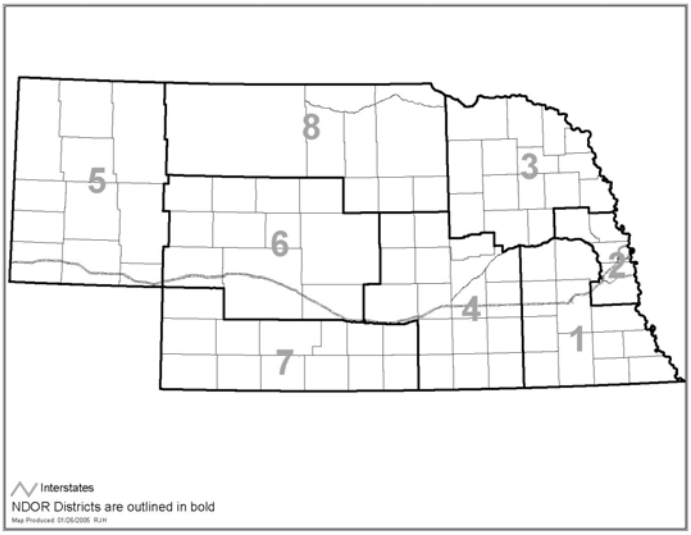


Figure 1.4 NDOR Districts

Table 1.2

Workforce Non-Farm Employment 2009 Annual Average Percent of District Employment by Industry											
District	Total Employment	Manufacturing	Natural Resources & Construction	Trade, Transportation, Warehousing & Utilities**	Information	Financial Activities	Professional & Business Services	Education & Health Services	Leisure and Hospitality	Other Services, except Public Admin	Total Government (Public Administration)
1	167,878	3%	5%	17%	1%	9%	2%	16%	11%	5%	30%
2	401,261	7%	6%	19%	2%	8%	15%	16%	10%	4%	14%
3	65,741	13%	5%	21%	1%	4%	6%	13%	8%	3%	25%
4	89,580	9%	5%	22%	1%	5%	6%	15%	11%	4%	22%
5	31,948	3%	5%	26%	1%	6%	4%	13%	11%	3%	26%
6	26,928	1%	5%	22%	2%	5%	6%	16%	13%	4%	26%
7	14,928	2%	5%	22%	0%	6%	3%	11%	10%	2%	39%
8	7,378	3%	4%	21%	1%	4%	2%	14%	11%	4%	36%
State	947,133*	10%	5%	21%	2%	7%	10%	14%	9%	4%	18%

*District total employment does not add to statewide total employment due to county level suppression.
**Includes Rail Road employment
Source: Nebraska Department of Labor, Labor Market Information

Special Note: In January and February of 2009, the Nebraska Department of Labor (NDOL) reported employment of 10,390 and 10,356 respectively in the Trade, Transportation, and Warehousing & Utilities (TTW & U) industry in District 6. Therefore, the TTW & U industry employed 29% of the District 6 workforce in early 2009. The remainder of months are suppressed due to confidentiality requirements and an annual average of 266 is reported for the year. This annual average results in only 22% of the district's employment displayed in the table above in the TTW&U industry. The vast majority (63%) of the TTW & U employment was found in Lincoln County.

1.2 Transportation and Travel Trends

The vast majority of trips made in the State are in personal vehicles. According to the 2008 American Community Survey, 80 percent of Nebraska commuters drive alone to work. Carpooling accounted for 10 percent and public transportation accounts for only a small share (less than one percent) of commuters in the State.

Method of Travel to Work in Nebraska

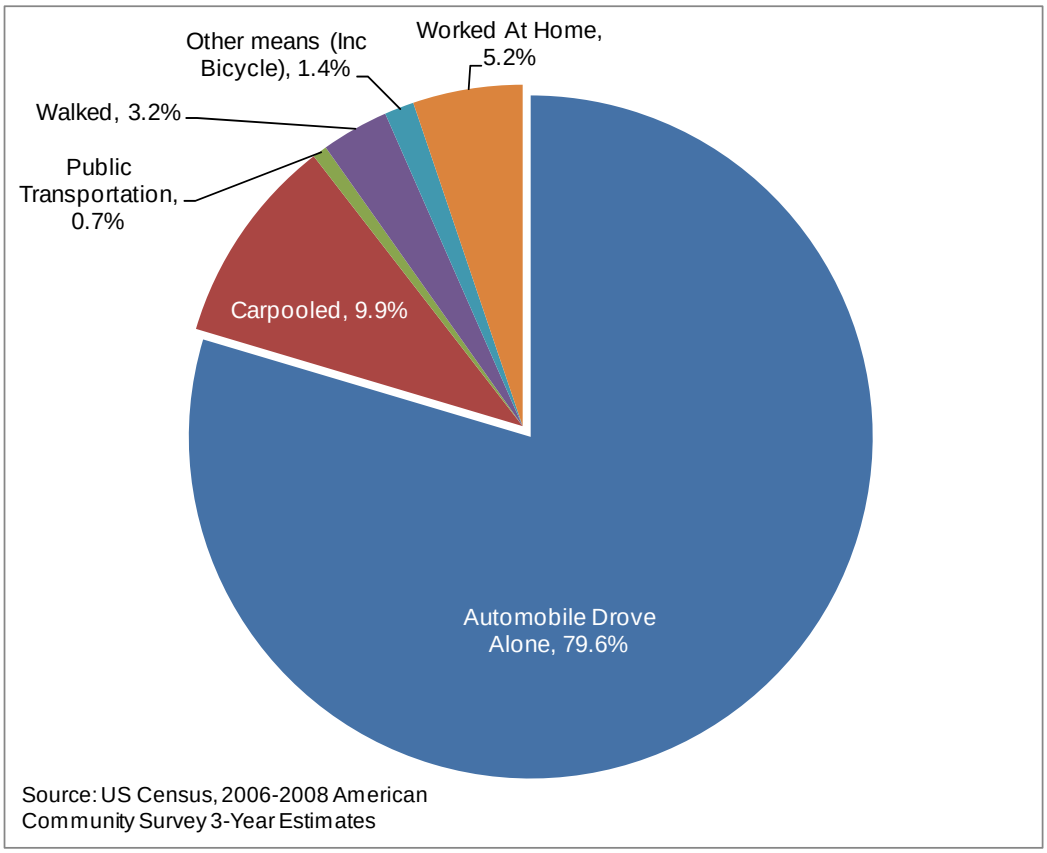


Figure 1.5

Commuting travel times in Nebraska are among the lowest in the United States. In 2008, the average travel time to work in Nebraska was less than 18 minutes in comparison to the U.S. average of 25 minutes. A larger proportion of Nebraska commuters drive alone (79.6% NE vs. 75.5% US) and a lower proportion use public transportation (.7% NE vs. 4.9% US) than for the nation as a whole. In addition, a somewhat higher percentage of Nebraskans work at home (5.2% NE vs. 4.0% US).

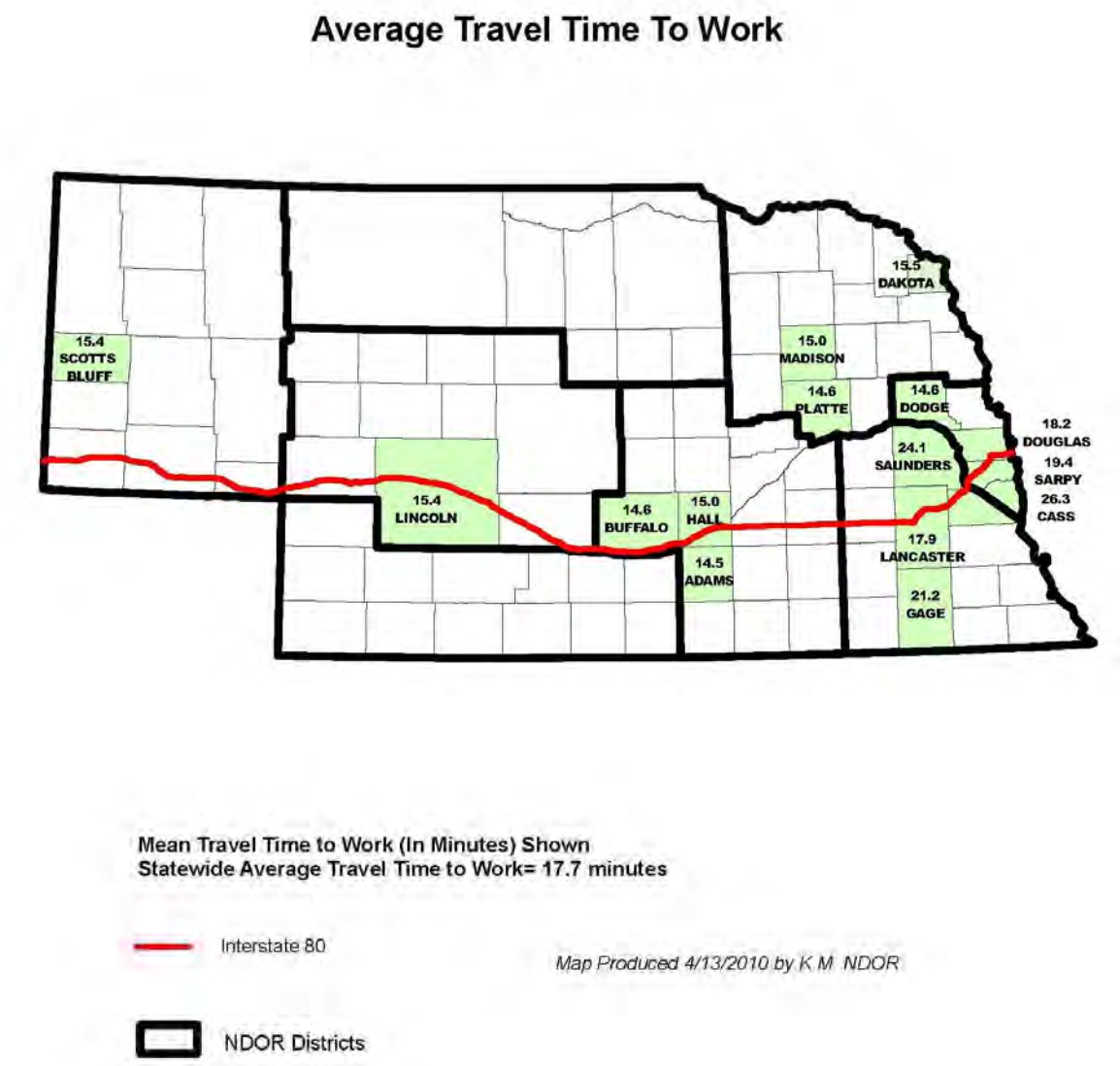
Table 1.3 shows the means of travel and average travel time to work by mode. Sarpy and Cass counties have the highest percentage of residents who commute alone.

Table 1.3 Method of Travel/Average Travel Time to Work

County	Auto Drove Alone	Auto Carpool	Public Transit	Walked	Other means (Includes Bicycle)	Worked At Home		Mean Travel Time to Work (minutes)
Adams	76.4%	14.1%	0.2%	4.2%	1.0%	4.1%		14.5
Buffalo	83.0%	7.1%	0.1%	3.9%	1.6%	4.4%		14.6
Cass	83.5%	9.8%	0.0%	1.3%	0.7%	4.8%		26.3
Dakota	73.1%	14.8%	0.4%	3.9%	3.4%	4.3%		15.5
Dodge	71.1%	17.7%	0.1%	3.6%	1.6%	6.0%		14.6
Douglas	81.8%	10.1%	1.2%	2.0%	1.2%	3.8%		18.2
Gage	79.2%	10.4%	0.0%	1.5%	2.0%	7.0%		21.2
Hall	83.0%	10.8%	0.2%	1.0%	1.4%	3.6%		15.0
Lancaster	80.6%	9.3%	1.4%	3.1%	1.9%	3.7%		17.9
Lincoln	80.7%	10.0%	0.1%	2.3%	1.7%	5.2%		15.4
Madison	80.0%	13.6%	0.2%	2.4%	0.4%	3.4%		15.0
Platte	82.7%	7.5%	0.1%	2.9%	0.9%	6.0%		14.6
Sarpy	86.7%	7.5%	0.3%	1.2%	0.8%	3.4%		19.4
Sunders	77.3%	10.2%	0.0%	4.5%	0.9%	7.1%		24.1
Scotts Bluff	81.3%	7.9%	0.6%	2.0%	2.7%	5.5%		15.4
Nebraska	**79.6%**	**9.9%**	**0.7%**	**3.2%**	**1.4%**	**5.2%**		**17.7**

Source: US Census, 2006-2008 American Community Survey 3-Year Estimates

Figure 1.6 on the next page maps the average commute times for selected counties in Nebraska. Cass County's average commute time (26.3) is the only county with a commute time greater than the national average of 25 minutes. The average commute time for the State of Nebraska is 17.7 minutes

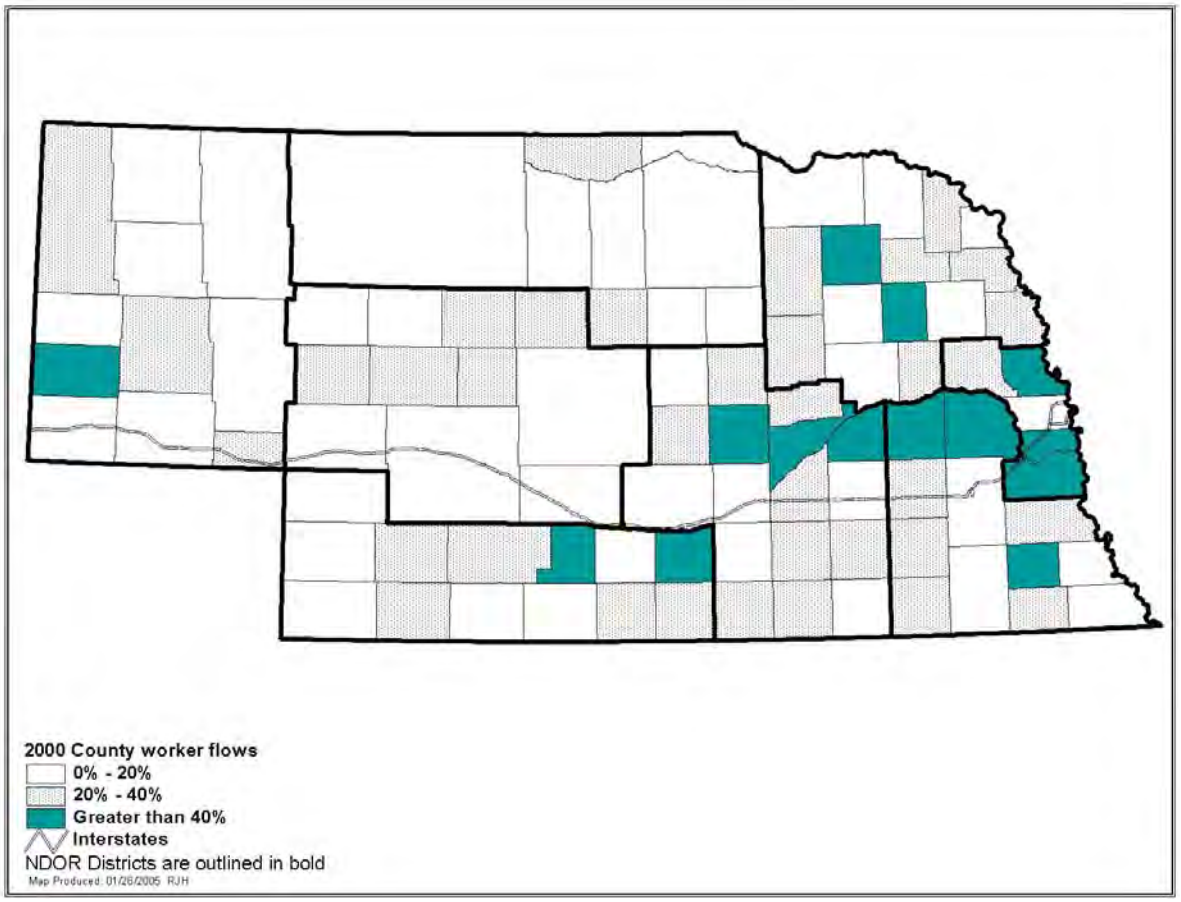


Source: US Census, 2006-2008 American Community Survey 3-Year Estimates

Figure 1.6

One of the primary transportation issues facing Nebraska is the need for connections between rural areas and job locations. As shown in Figure 1.7, in a number of counties across the State, a high proportion of residents are traveling to locations outside of their counties of residence for employment opportunities. The transportation system must preserve access between rural and urban areas and meet the demand for these travel patterns.

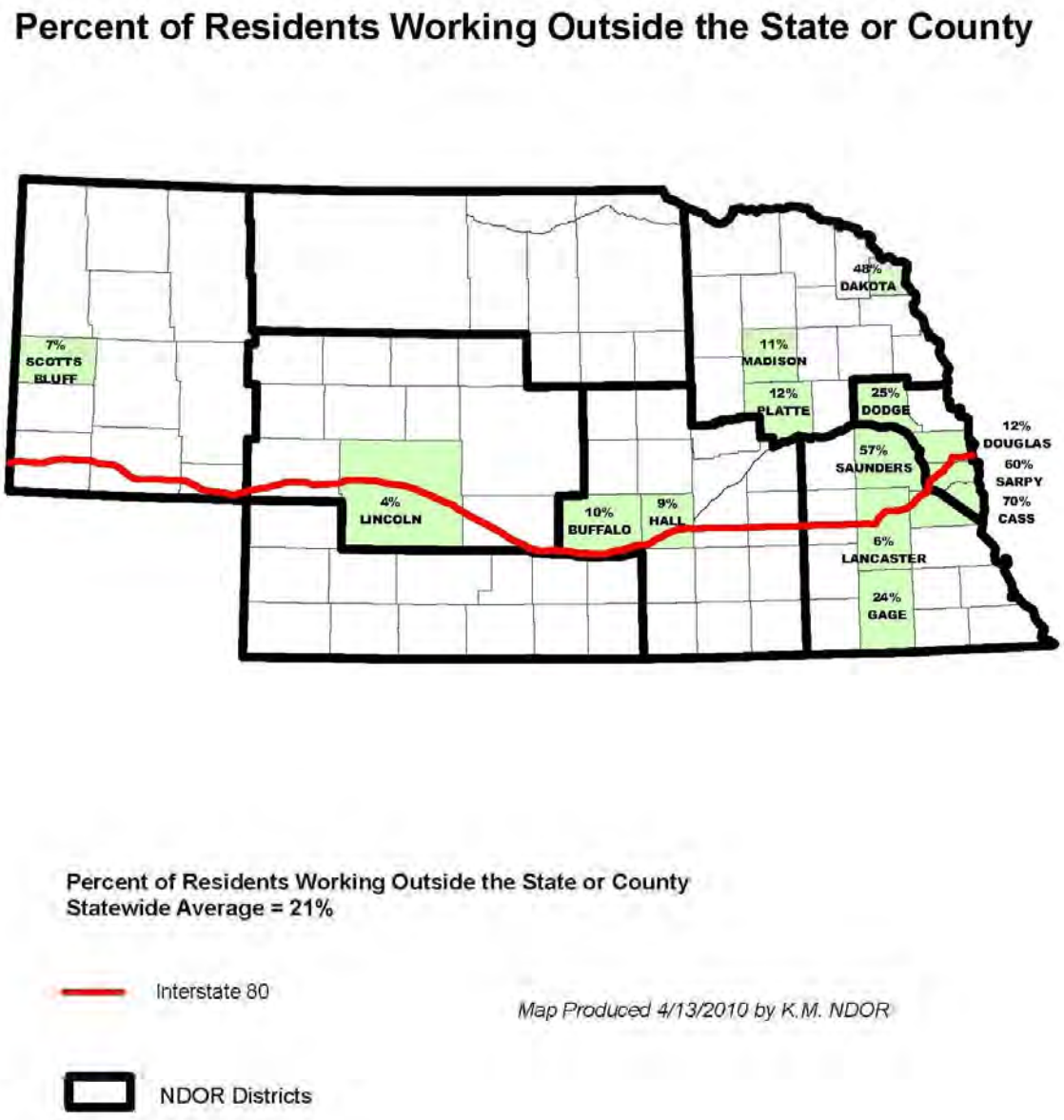
Percent of Residents Working Outside County of Residence



Source: U.S. Census, 2000

Figure 1.7

The percent of commuters shown in Figure 1.7 can be updated using data from the American Community survey. Figure 1.8 below shows data from the counties that were included in this survey. In five Nebraska counties, at least half of their residents commute to employment outside the county. These counties include Cass (70%), Sarpy (60%), Saunders (57%) and Dakota (48%). Overall, 21% of Nebraska residents work outside their county of residence.



Source: US Census, 2006-2008 American Community Survey 3-Year Estimates

Figure 1.8

Freight Movement[1]

Freight is an important aspect of transportation and efficient freight movement, is vital for the economic well-being of Nebraska as well as the US. The two most relevant freight transportation modes in Nebraska are trucks and rails. Major freight corridors utilizing these two travel modes traverse across the width of the state. As shown below in table 1.4, estimates from Freight Analysis Framework (version 3, FAF^3, a federal program that integrates data from a variety of sources to estimate freight flows) show that truck-based freight will increase from 222.37 million tons per year in 2007 to 373.00 million tons per year in 2040 representing a 67.7% increase while rail-based freight will increase from 22.585 million tons to 26.251 million tons representing an increase of 16.2%.

The value of yearly freight originating in Nebraska and transported via trucks is expected to increase from $84.9 million in 2007 to $185.7 Billion in 2040 indicating a 118.6% increase. The monetary value of freight transported by rail is expected to increase from $6.2 Billion to $9.7 billion representing an increase of 56.5%. Thus, significantly more freight tonnage and of considerably greater value will be transported on Nebraska highway and rails in the coming years. Some of the commodities moved within, from, and to Nebraska include cereal grains, gravel, coal, and agriculture products including live animals. Iowa and Kansas are the two top trading partners for Nebraska based both on freight tonnage and the monetary value of traded freight.

Table 1.4 FAF^3 Prediction for Nebraska Freight Tonnage

Mode to transportation	Total thousands of tons, 2007	Total thousands of tons, 2040	Increase %
Truck	222,371.7	373,005.5	67.7%
Rail	22,585.9	26,251.1	16.2%
Water	2.9	3.0	1.1%
Air (include truck-air)	19.9	38.1	91.2%
Multiple modes & mail	3,918.5	6,252.4	59.6%
Pipeline	556.8	451.8	-18.9%
Other and unknown	744.1	1,147.6	54.2%

(Data source: <http://faf.ornl.gov/fafweb/Extraction1.aspx>, accessed: 07/24/2011)

Two changes related to freight transportation at the international level could impact freight trends in Nebraska. The first is the expansion of the Panama Canal by adding a third set of locks. This expansion is expected to be complete by 2014 and it will allow much larger cargo vessels to traverse the canal than is currently feasible. As a result, trade patterns in the US may shift with increased Asian trade moving from the Pacific to the Atlantic ports. The second change is the opening of the so called Northwest Passage, which is a sea route through the Arctic Ocean along the northern coast of North America connecting the Atlantic and Pacific Oceans. Historically, the Arctic pack ice prevented

[1] Below is the executive summary of a report on the freight transportation status in Nebraska completed by Nebraska Transportation Center at the University of Nebraska—Lincoln. The full report can be found in Vision 2032 Appendix

regular shipping but recent changes in the climate have reduced this pack ice and made the waterway more navigable. The route can be especially useful for ships that are too big to pass through the Panama Canal and must navigate around the tip of South America.

While pending international political resolutions to be fully operational, the opening of this route can significantly alter existing freight transportation trends in the US. The implications of these two international changes for Nebraska freight are difficult to ascertain due to paucity of data and fluidity of the political atmosphere at this time. Nonetheless, these two changes warrant careful monitoring in the future and assessment of likely impacts on Nebraska freight transportation when needed data are available.

Historic trends and results of freight modeling of truck freight transportation show that it will significantly increase in Nebraska over the coming years. Future needs from NDOR's planning perspective will be accommodating the increasing truck traffic on Nebraska's highways and the resulting wear on highway infrastructure.

2.0 Nebraska Transportation System

2.1 Nebraska Highway System

The Nebraska highway and roadway network serves as the primary mode of transportation for both personal and freight travel within the State. Nebraska has 93,654 miles of roads, of which 9,944 miles (10.6 percent) are state-owned roads. In 2008, there were 18.864 billion annual vehicle miles of travel (AVMT) on Nebraska roadways, with approximately 63 percent on state roads. Nebraska's annual highway VMT per capita is 10,497, almost 10 percent above the national average of 9,500. Additionally, an estimated 26.1 billion ton-mile of freight moved on Nebraska's highways in 2008. Table 2.1 shows the road inventory by functional class, mileage, and ownership.

Table 2.1 Centerline Mileage of Nebraska Highways by Road Type and Ownership
By National Functional Classification

Road Type	State-Owned Mileage	Non-State Mileage	Total Mileage
Urban			
Interstate	64	-	64
Principal Arterials	325	173	498
Minor Arterials	117	760	777
Collectors	-	483	483
Local Roads	-	4,611	4,611
Subtotal Urban	*406*	*6,027*	*6,433*
Rural			
Interstate	418	-	418
Principal Arterials	2,694	-	2,694
Minor Arterials	4,168	1	4,169
Collectors	2,254	18,033	20,287
Local Roads	4	59,649	59,683
Subtotal Rural	*9,538*	*77,683*	*87,221*
Grand Total	**9,944**	**83,710**	**93,654**

Source: NDOR Materials & Research Division – December 12, 2010.

Demand for Travel

Table 2.2 shows annual VMT (in billions) on Nebraska roads by roadway type and ownership. The higher functional classes carry the heaviest traffic loads per mile of facility.

Table 2.2 Annual Vehicle Miles of Travel (VMT) by Roadway Type – 2008

Type of Roadway	2008 VMT (Billions)	Percentage Total VMT	Percentage Total Road Mileage
Interstate	3.924	21%	.5%
Other State Roads	7.908	42%	9.8%
Subtotal State Roads	*11.832*	*63%*	*10.3%*
Local Roads	7.032	37%	89.7%
All Nebraska Roads	**18.864**	**100%**	**100%**

Source: NDOR

The differences in traffic volumes on various road systems are significant. The urban and rural interstate system in Nebraska comprises about one-half of one percent of the total state roadway system mileage but carries 21 percent of all vehicle traffic. By contrast, Nebraska's local (non-state) roads comprise about 89.7% of miles but carry only 37% of vehicle traffic. Because these lower volume roadways are important for a functioning transportation system, they cannot be neglected.

Traffic Forecasts – State Highway System

Projected annual VMT growth provides an indicator of future demands on Nebraska's transportation system. As indicated in Table 2.3, these forecasts indicate that total VMT will grow on all state systems by 54 percent over 20 years with the interstate system forecast to experience the highest level of growth, at 68 percent. The forecast of average annual VMT growth is about 2.2 percent per year, in comparison to forecast population growth of just below 1.0 percent per year.

Table 2.3 Forecast of Annual Vehicle Miles of Travel (VMT)

State and Local and State Roadway Type	2008 VMT (Billions)	Forecast 2028 VMT (Billions)	Percent Average Annual Growth 2008-2028	Percent Total Growth 2008-2028
Interstate	3.924	6.601	2.63%	68%
Other State Roads	7.908	11.606	1.94%	47%
State System Totals	**11.832**	**18.207**	**2.20%**	**54%**

Source: NDOR

Estimates of VMT were made for Nebraska's three metropolitan planning areas. The VMT totals presented in Table 2.4 include both state and non-state roadways within the Nebraska portions of each of the metropolitan areas.

Table 2.4 Current and Forecast Vehicle Miles of Travel (VMT) by Metropolitan Planning Area

	Daily VMT		
Metropolitan Planning Area	2000	2030	Percent Change
Lincoln	3,863,000	8,040,000	108%
Omaha (Nebraska Only)	12,390,000	25,000,000	102%
Sioux City (Nebraska Only)	234,594	394,079	68%

Sources: MAPA, Lincoln, and SIMPCO MPOs

Pavement Conditions

NDOR's Pavement Optimization Program (POP) assists in determining what type of maintenance and construction actions should be recommended on sections of roadway. NDOR measures the quality of the highway surface based on annual inspections and rates the roads based upon the Nebraska Serviceability Index (NSI). The goal of NDOR is to keep at least 84 percent of highway system miles at a NSI rating of 70 and above, which indicates that pavement is in good or very good condition.

Table 2.5 shows state highway system pavement conditions for 2010. Ninety-three percent of the interstate system mileage is rated as "good" or "very good," while 75 percent of the total state highway system is rated as "good" or "very good." Only three percent of the state highway system is rated as "poor." Pavement conditions on the state system have been consistent over the last five years. NDOR also measures the smoothness of roads using the International Roughness Index (IRI). The IRI ratings for smoothness closely parallel the NSI ratings. Table 2.6 shows the percentage of miles meeting or exceeding acceptable ride quality.

Table 2.5 Percentage of Miles by Pavement Condition Rating by State Highway System (NSI), 2010

Pavement Condition Rating	Interstate System	Other State Highways	Total State Highway System
Very Good	39%	31%	31%
Good	54%	43%	44%
Fair	7%	23%	22%
Poor	0%	3%	3%
Very Poor	0%	0%	0%

Source: NDOR Materials & Research Division, November 2010. These ratings are based on the Nebraska Serviceability Index (NSI), which is a measurement of the quality of the highway surface.

Table 2.6 Percent of Miles Meeting or Exceeding Acceptable Ride Quality (IRI)

	Interstate System	Other State Highways	Total State Highway System
2003	92%	84%	84%
2004	92%	85%	85%
2005	95%	86%	87%
2006	96%	91%	91%
2007	97%	90%	91%
2008	99%	91%	92%
2009	99%	91%	91%
2010	99%	90%	91%

Source: NDOR Materials and Research Division, November 2010.

Note: International Roughness Index (IRI) is a measure used nationally and internationally that is based upon the horizontal changes in the pavement surface and is a measurement of the smoothness of the roadway.

Bridge Conditions

According to the Bridge Division's National Bridge Inspection System Database, NDOR maintains 3,516 bridges on the state system and there are 11,829 bridges under the jurisdiction of local governments. Table 2.7 shows the most recent Nebraska data on bridge conditions. Bridges on the state system, which carry much higher volumes, are in better condition than local bridges, with only seven percent of state bridges being structurally deficient or functionally obsolete.

Table 2.7 Percentage of Structurally Sound and Functionally Adequate Bridges – Recent History

	2000	2002	2004	2006	2008	2010
State Highways	92%	92%	93%	94%	94%	93%
Local Roads	65%	67%	69%	70%	71%	70%
Total All Roads	**71%**	**72%**	**74%**	**76%**	**77%**	**75%**

Source: NDOR Bridge Division

Safety

In 2010, there were an estimated 190 fatalities and 33,212 total accidents on Nebraska's roads. Nebraska's highway traffic fatality rate closely parallels the U.S. average, but Nebraska's rate has declined somewhat over the twelve years from 1998 to 2010, as shown in Table 2.8. Nebraska now experiences 1.0 fatalities per 100 million miles of travel, in comparison to 1.1 for the nation.

Table 2.8 Highway Traffic Fatality Rates per 100 Million Vehicle Miles of Travel (VMT)

	1998	2000	2002	2004	2006	2008	2010
Nebraska	1.8	1.6	1.7	1.4	1.4	1.1	1.0
United States	1.6	1.5	1.5	1.4	1.4	1.3	1.1

Source: NDOR Performance Measures, 2011.

2.2 Public Transportation Inventory

Public transportation serves an important role in providing a range of modal transportation choices for citizens of the State. Metropolitan transit providers are located in: Omaha – Metro; Lincoln – StarTran; and South Sioux City – a route of the Sioux City Transit System (SCTS). Table 2.9 provides a brief summary of key statistics for the metropolitan transit systems. Each of these transit agencies also provides demand-response (paratransit) door-to-door services within the regular route service areas.

Table 2.9 Metropolitan Area Transit Providers in Nebraska

Transit System Indicator	Omaha – Metro	Lincoln – StarTran	Sioux City – SCTS[1]
Fleet Size	138	72	25
Routes	23	18	1[1]
Annual Unlinked Trips	4,158,568	1,809,546	46,536
Annual Passenger Miles	17,790,720	4,938,000	232,680[3]
Percentage of Total Trips that are Demand Response	1.9%	3.08%	3.1%[2]
Fare Recovery Ratio	20%	13.5%	23.8%[2]

Source: 2008 National Transit Database Report; additional information was obtained from the web sites for Metro, StarTran, and SCTS (FY 2010 for SCTS Data and FY 2009-10 StarTran Data).

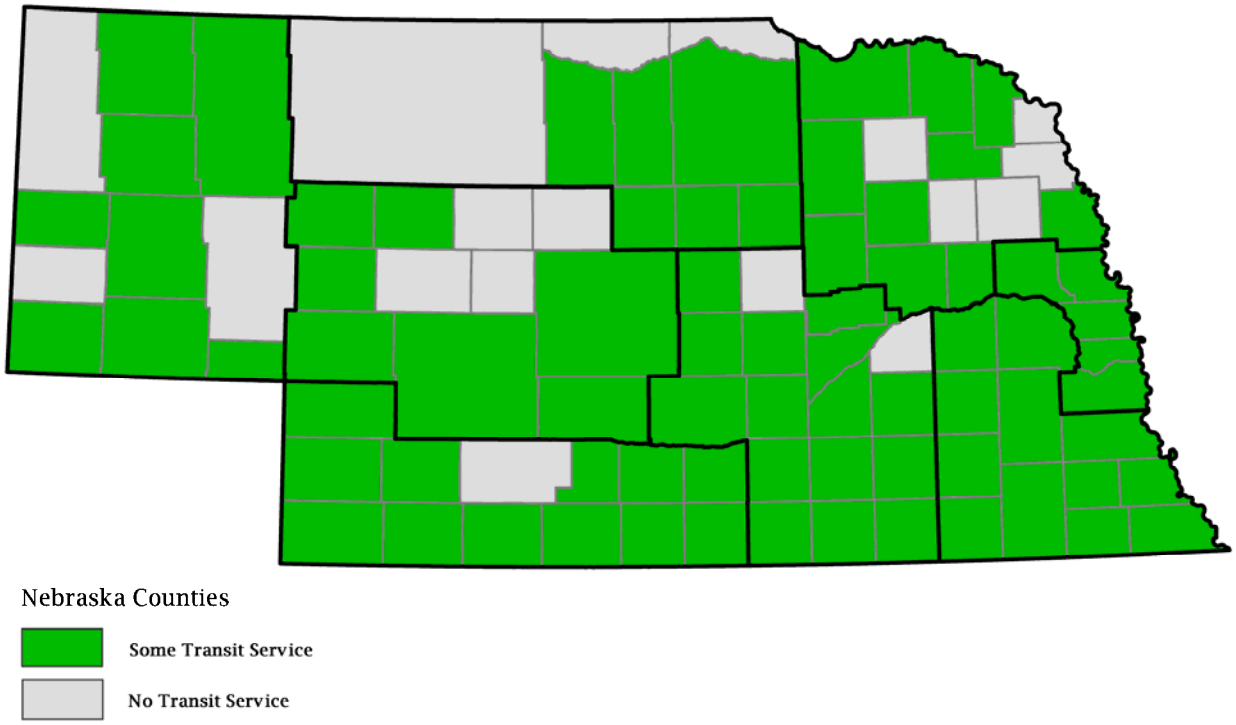
[1] Route #9 serves South Sioux City.

[2] System cost-recovery ratio and demand response percentage includes routes in Sioux City, Iowa. FY 2010 Statistics: Demand Response % (37,362/1,202,818) and Fare Recovery Ratio: $982,118/$4,129,359.

[3] From SCTC~Passenger miles survey counts taken in 2008 by LSC Transportation Consultants, Colorado Springs, Colorado in a formal route study. Average passenger miles per un-linked trip are 5.0 miles

The transit service providers in the three metropolitan areas account for the majority of transit trips in the State. Transit service for the counties outside the metropolitan areas is primarily demand-response transit or paratransit, but all are open to the general public. Some of these agencies require advance reservations (e.g., 24 hours in advance) in order to use the service. As shown in Figure 2.1, 74 out of the 93 counties in Nebraska provide some form of transit service.

Summary of County Transit Service Review



Source: NDOR.

Figure 2.1

Public Transportation Trends and Forecasts

In Omaha and Lincoln, annual transit ridership is lower today than 20 years ago. Transit services in Lincoln carried approximately 3.5 million annual trips in 1981, in comparison to approximately 1.5 million trips in 2004. Transit services in Omaha carried approximately 9.3 million annual trips in 1981, in comparison to 3.7 million trips in 2009. More recently, the transit ridership in the two metropolitan areas has remained constant. Transit usage in Lincoln is projected to grow one percent annually through 2025. In Omaha, Metro projects ridership to grow an average of two percent annually through 2025.

In 2009, there were approximately 725,000 passenger boardings for the 61 rural transit systems in the State. With the aging population within Nebraska, particularly in rural counties, the usage and demand for paratransit services is likely to grow.

2.3 Intercity Rail and Bus

Amtrak serves one route, called the California Zephyr, which operates on freight railroad tracks owned by Burlington Northern. This route operates between San Francisco and Chicago. Only one train per day per direction stops in Nebraska; these stops are located in Omaha, Lincoln, Hastings, Holdrege, and McCook. In 2009, there were 43,085 Amtrak passenger boardings in Nebraska.

In 2009, there were approximately 7,000 passenger boardings in Nebraska for intercity bus providers (excluding ARROW Stageline, Epply Express and Burlington Trailways). Table 2.10 lists the seven intercity bus and van operators and routes in Nebraska. The majority of these intercity providers utilize passenger vans. Most of these providers make one roundtrip per day for each of their routes. In some cases (i.e., Blue Rivers), a route is only run once or a few times a week.

Table 2.10 Intercity Bus Providers in Nebraska

Company	Route(s)
Arrow Stage Line	Omaha to Denver
Black Hills Stage Line	Norfolk to Omaha
Blue Rivers Transportation System	Auburn-Nebraska City to Lincoln; Auburn-Nebraska City to Omaha; Fairbury-Beatrice to Lincoln
Dashabout Shuttle	North Platte to Denver; McCook to Denver; Imperial to Denver; McCook to Grand Island; North Platte to Omaha; McCook to North Platte
Eppley Express	Kearney to Omaha
K & S Express	Norfolk to Chadron

Source: NDOR 2010 Nebraska Transit Directory.

2.4 Bicycle and Pedestrian Inventory

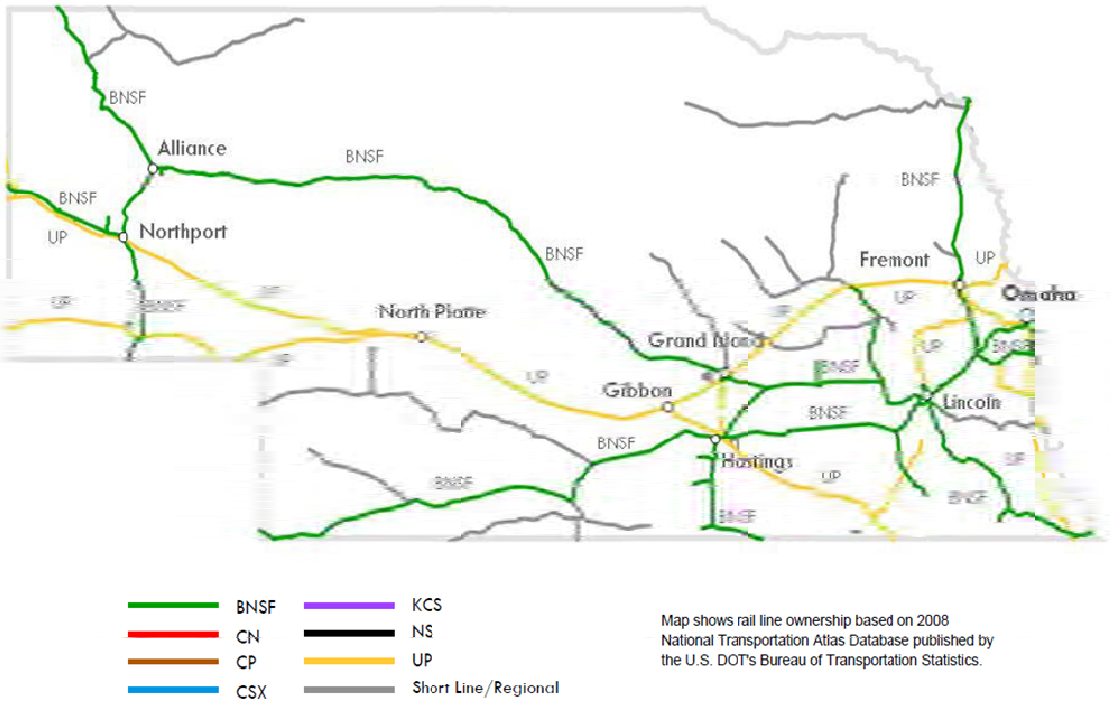
A number of different organizations including the State of Nebraska and various local communities have made significant investments in constructing new multiuse trails to serve pedestrian and bicycle travel. Over the last decade, many miles of trails (e.g., Cowboy) and bridges (e.g., Lied Platte River Bridge, Bob Kerry Pedestrian Bridge) have been constructed and various communities are in the process of planning or construction additional multiuse trails.

The state highway system also offers another means for bicyclists to travel between communities in Nebraska and NDOR has a map showing the compatibility of bicycling on each state highway. The continued expansion of the multiuse trail system and improvements to existing transportation facilities encourage an increase in these modes for both work and non-work trips.

2.5 Rail Freight Inventory

Nebraska has an extensive rail freight system, estimated at 3,430 rail miles. Rail carries an estimated 28.9 million tons of freight originating in Nebraska. The higher proportion of ton-miles is the result of trip lengths for rail freight shipments that are typically much longer than those on trucks. Farm products are the top commodity carried by rail from Nebraska. Rail also carries 17.6 million tons of products to Nebraska, of which the top commodity is coal. Nebraska's rail freight employment in 2008 totaled 12,246, third in the nation to Texas and Illinois. The impact of the through rail traffic is also substantial, with some rail lines averaging more than 120 trains per day. Nebraska had 5,796 rail-highway grade crossings in 2009. As shown in Figure 2.2, BNSF and UP control most of the rail network in Nebraska.

Railroad Network and Ownership



Source NDOR

Figure 2.2

2.6 Marine Inventory

The Missouri River provides the only route for waterborne commerce in the State and serves as Nebraska's 318-mile eastern border. The Missouri River is navigable from Sioux City, Iowa, to its junction with the Mississippi River, a length of 735 miles. In 2010, 46,184 tons of commodities moved to and from Nebraska via the Missouri River. Shipments from Nebraska were destined to Alabama and Louisiana while shipments to Nebraska originated in Mississippi and Louisiana.

2.7 Aviation Inventory

There are 81 airports currently licensed by the State of Nebraska to operate as public-use facilities. This includes the sea plane base at the Harlan County Lake near Alma. A list and a map of these locations are shown in Figure 2.3. Two of the airports (North Omaha and South Sioux City) are privately owned. The remaining airports are publicly owned facilities, owned by either a village/city or the county.

Figure 2.3

As of December 31, 2008, all public-use facilities are required to meet the state licensing standards or have a waiver from the department. The licensing standards are found in the Nebraska Administrative Code. The licensing standards set minimum runway dimensions and restrict the allowable height of objects surrounding the runway. They do not include land use restrictions or minimum facility requirements (other than runway length and width).

Airport activity statistics are listed in Table 2.11. Statewide totals of based aircraft and annual operations have decreased at public-use airports in the last 5 years. These decreases can be attributed to the depressed economy and increased aircraft operating expense. We expect aircraft activity to recover with the economy. The information is gathered during annual interviews with the airport managers done as part of the 2010 inspection. Exact operation counts are not known at many general aviation airports and the reported figures are based on estimates. There are many more aircraft and operations at privately-owned facilities. However, data is not available from these types of facilities.

Table 2.11 Based Aircraft and Annual Operations 2010

City	Airport	Based Aircraft	Annual Operations
AINSWORTH	AINSWORTH MUNICIPAL AIRPORT	11	4,000
ALBION	ALBION MUNICIPAL AIRPORT	13	5,100
ALLIANCE	ALLIANCE MUNICIPAL AIRPORT	58	14,700
ALMA	ALMA MUNICIPAL AIRPORT	4	850
ALMA	HARLAN COUNTY LAKE	0	2
ARAPAHOE	ARAPAHOE MUNICIPAL AIRPORT	3	2,250
ATKINSON	STUART-ATKINSON MUNICIPAL AIRPORT	11	2,700
AUBURN	FARINGTON FIELD	5	2,150
AURORA	AURORA MUNICIPAL AIRPORT	31	15,925
BASSETT	ROCK COUNTY AIRPORT	4	2,000
BEATRICE	BEATRICE MUNICIPAL AIRPORT	21	10,175
BLAIR	BLAIR MUNICIPAL AIRPORT	38	15,500
BLOOMFIELD	BLOOMFIELD MUNICIPAL AIRPORT	5	4,050
BROKEN BOW	BROKEN BOW MUNICIPAL AIRPORT	12	10,830
BURWELL	CRAM FIELD	6	900
CAMBRIDGE	CAMBRIDGE MUNICIPAL AIRPORT	6	7,000
CENTRAL CITY	CENTRAL CITY MUNICIPAL AIRPORT	20	5,514
CHADRON	CHADRON MUNICIPAL AIRPORT	21	7,848
CHAPPELL	BILLY G RAY FIELD	1	3,320
COLUMBUS	COLUMBUS MUNICIPAL AIRPORT	37	15,000
COZAD	COZAD MUNICIPAL AIRPORT	24	13,000
CREIGHTON	CREIGHTON MUNICIPAL AIRPORT	9	2,320
CRETE	CRETE MUNICIPAL AIRPORT	56	23,420
CURTIS	CURTIS MUNICIPAL AIRPORT	8	6,280
DAVID CITY	DAVID CITY MUNICIPAL AIRPORT	3	3,400
FAIRBURY	FAIRBURY MUNICIPAL AIRPORT	9	6,400
FAIRMONT	FAIRMONT STATE AIRFIELD	15	1,585
FALLS CITY	BRENNER FIELD	25	4,700
FREMONT	FREMONT MUNICIPAL AIRPORT	50	22,300
GENOA	GENOA MUNICIPAL AIRPORT	3	1,050
GORDON	GORDON MUNICIPAL AIRPORT	8	4,650
GOTHENBURG	QUINN FIELD	18	7,644
GRAND ISLAND	CENTRAL NEBRASKA REGIONAL AIRPORT	37	23,048
GRANT	GRANT MUNICIPAL AIRPORT	16	9,500
HARTINGTON	HARTINGTON MUNICIPAL AIRPORT	18	6,600

City	Airport	Based Aircraft	Annual Operations
HARVARD	HARVARD STATE AIRFIELD	5	1,570
HASTINGS	HASTINGS MUNICIPAL AIRPORT	27	19,000
HAY SPRINGS	HAY SPRINGS MUNICIPAL AIRPORT	3	400
HEBRON	HEBRON MUNICIPAL AIRPORT	5	2,920
HOLDREGE	BREWSTER FIELD	18	10,100
HYANNIS	GRANT COUNTY AIRPORT	6	1,825
IMPERIAL	IMPERIAL MUNICIPAL AIRPORT	15	9,700
KEARNEY	KEARNEY REGIONAL AIRPORT	29	30,040
KIMBALL	ROBERT E ARRAJ FIELD	17	4,750
LEXINGTON	JIM KELLY FIELD	26	10,640
LINCOLN	LINCOLN AIRPORT	239	63,021
LOUP CITY	LOUP CITY MUNICIPAL AIRPORT	6	1,400
MC COOK	MC COOK BEN NELSON REGIONAL AIRPORT	32	16,900
MINDEN	PIONEER VILLAGE FIELD	8	7,000
NEBRASKA CITY	NEBRASKA CITY MUNICIPAL AIRPORT	14	5,300
NELIGH	ANTELOPE COUNTY AIRPORT	16	5,300
NORFOLK	KARL STEFAN MEMORIAL AIRPORT	43	26,934
NORTH PLATTE	NORTH PLATTE REGIONAL AIRPORT	48	37,814
OGALLALA	SEARLE FIELD	13	4,483
OMAHA	EPPLEY AIRFIELD	122	115,034
OMAHA	MILLARD AIRPORT	131	72,300
OMAHA	NORTH OMAHA AIRPORT	58	14,250
O'NEILL	O'NEILL MUNI-JOHN L BAKER FIELD	16	7,440
ORD	EVELYN SHARP FIELD	10	7,000
OSHKOSH	GARDEN COUNTY AIRPORT	9	6,270
PAWNEE CITY	PAWNEE CITY MUNICIPAL AIRPORT	0	844
PENDER	PENDER MUNICIPAL AIRPORT	10	2,700
PLATTSMOUTH	PLATTSMOUTH MUNICIPAL AIRPORT	46	20,500
RED CLOUD	RED CLOUD MUNICIPAL AIRPORT	7	5,160
RUSHVILLE	MODISETT FIELD	4	3,250
SARGENT	SARGENT MUNICIPAL AIRPORT	2	5,000
SCOTTSBLUFF	WESTERN NEBR. REGIONAL/WM. B. HEILIG FIELD	43	27,965
SCRIBNER	SCRIBNER STATE AIRFIELD	14	2,600
SEWARD	SEWARD MUNICIPAL AIRPORT	36	12,650
SIDNEY	SIDNEY MUNICIPAL AIRPORT	29	11,475
SO SIOUX CITY	MARTIN FIELD	36	20,900
SUPERIOR	SUPERIOR MUNICIPAL AIRPORT	7	12,500
TECUMSEH	TECUMSEH MUNICIPAL AIRPORT	2	5,000
TEKAMAH	TEKAMAH MUNICIPAL AIRPORT	20	26,270
THEDFORD	THOMAS COUNTY AIRPORT	5	6,150
TRENTON	TRENTON MUNICIPAL AIRPORT	2	3,750
VALENTINE	MILLER FIELD	25	4,264
WAHOO	WAHOO MUNICIPAL AIRPORT	42	16,350
WALLACE	WALLACE MUNICIPAL AIRPORT	10	2,675
WAYNE	WAYNE MUNICIPAL AIRPORT	22	8,480
YORK	YORK MUNICIPAL AIRPORT	20	10,300
	TOTALS	1,904	955,885

In 2009, there were more than two million commercial air passenger enplanements at Nebraska airports. Table 2.12 shows the number of enplanements at each of the airports with commercial service. Eppley Airfield ranks 62nd in the United States in terms of number of enplanements.

Table 2.12 2009 Commercial Airport Enplanements

Airport Name	City	Airport Classification	2004 Enplanements	2009 Enplanements	Percent Change
Eppley Airfield	Omaha	Primary, Hub	1,892,379	2,083,973	10.12%
Lincoln Airport	Lincoln	Primary	220,232	142,507	-35.29%
Central Nebraska Regional	Grand Island	Primary	6,781	20,136	196.95%
Kearney Regional	Kearney	Primary	6,479	10,113	56.09%
Western Nebraska Regional	Scottsbluff	Commercial Service	10,086	9,221	-8.58%
North Platte Regional	North Platte	Commercial Service	7,480	7,924	5.94%
Chadron Municipal	Chadron	General Aviation	1,484	1,875	26.35%
McCook Ben Nelson Regional	McCook	General Aviation	2,085	1,677	-19.57%
Alliance Municipal	Alliance	General Aviation	1,430	1,395	-2.45%
		Total	**2,148,436**	**2,278,821**	**25.51%**

Source: Federal Aviation Administration.

2.8 Intelligent Transportation Systems

Transportation operations are critical to enhancing the reliability, safety, and capacity of Nebraska's transportation system. Intelligent Transportation Systems (ITS) apply technology and information systems to manage the transportation system and to improve the information available to travelers. The diverse nature of the State's transportation system requires a broad range of management strategies and tools to address rural and urban needs, traffic and incident management, and weather and traveler information.

The Statewide ITS Architecture plan documents traffic management, traveler information, incident management, and maintenance and construction management services provided through NDOR. Listed below are the primary ITS planning and implementation elements that are underway or complete:

- District Operations Centers that utilize statewide ITS device software to control cameras, message boards, sensors, gates, etc.

- Statewide ITS Architecture Update

- Statewide DMS Message Set Development

- Nebraska 511 System – fully-implemented route-specific weather forecast and road condition reports for travelers;

- Dynamic Message Signs (DMS) – throughout the State in both permanent and temporary applications;

- Camera Integration with DMS, rural weather information systems (RWIS), and anti-icing;

- Nebraska ITS Incident Management Coordination and Integration; assisting the Iowa DOT in the development of a traffic incident management plan in the Omaha/Council Bluffs metropolitan area

- DMS Replacement

- Additional ITS device deployment and maintenance throughout Nebraska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